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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,275	02/11/2005	Benjamin Geiger	29140	9948
7590 03/26/2008				
Martin Moynihan Anthony Castorina 2001 Jefferson Davis Highway Suite 207 Arlington, VA 22215			EXAMINER CARLSON, KAREN C	
			ART UNIT 1656	PAPER NUMBER
			MAIL DATE 03/26/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/524,275

Applicant(s)

GEIGER, BENJAMIN

Examiner

Karen Cochrane Carlson, Ph.D.

Art Unit

1656

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-22, 44, 45, 47-51, 62 and 63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 44-51 and 63 is/are allowed.
- 6) ☒ Claim(s) 16-22 is/are rejected.
- 7) ☐ Claim(s) 42 and 62 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 20, 2008 has been entered.

It is noted that Applicants have shifted their invention from providing a chimeric polypeptideto a cell to expressing a polynucleotide encoding a chimeric polypeptide in a cell. While a shift is generally not permitted by the Office, the claims will be examined because art has already been provided that reads on this instant invention.

Claims 1-15, 23-41, 43, 46, and 52-61 have been cancelled. Claims 16-22 and 42, 44, 45, 47-51, 62, and 63 are currently under examination.

Benefit of priority is granted to August 20, 20002.

Withdrawal of Rejections:

The rejection of Claims 16-22 and 42-61 under 35 U.S.C. 112, second paragraph, is withdrawn.

The rejection of Claims 16-22 and 42-61 under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the BRET method for determining macromolecule identification in *E. coli* as set forth by Xu et al. below, does not reasonably provide enablement for method of highlighting a cell compartment, biological component, or other macromolecules that are endogenous to the organism, or in a multicellular organism or virus, is withdrawn due to the amendments to the claims and reconsideration of Applicants arguments.

Maintenance of Rejections:

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 16-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Xu et al. (1998;

A bioluminescence resonance energy transfer (BRET) system: Application to interacting circadian clock proteins. Proc Natl Acad Sci U S A. 1999 January 5; 96(1): 151–156).

At page 154, right col. para. 2, Xu et al. teach making fusion constructs of clock protein *kaib* to EYFP and *Rluc* and transforming *E. coli* with these constructs. Xu et al. added coelenterazine (see page 152, right col., para. 2, penultimate sentence) to the *E. coli* culture to and measured bioluminescence emission spectra via a spectrofluorometer with a xenon lamp (see page 152, right col., para. 2, line 10-11) as an indication of the formation of *Kaib* homodimers within the *E. coli*.

Therefore, Xu et al. teach a method of highlighting a macromolecule (*Kaib*) in an organism by providing a chimeric polypeptide comprising *Kaib:Rluc* and *Kaib:EYFP* and exposing the organism to a detectable molecule coelenterazine (**Claim 16**), wherein the organism is a bacterium *E. coli* (**Claim 17**), where in the chimera is expressed within the organism (**Claim 18**), wherein the detectable molecule coelenterazine is administered to the organism (**Claim 19**), wherein the detectable molecule was visualized (**Claim 20**) with a microscope (**Claim 21**) equipped with a light source (**Claim 22**).

Applicants urge that Xu et al. teach detection of macromolecules that comprise an artificial fluorophore and that Xu et al. do not detect macromolecules that are endogenous to the cell. Note that the claims do not state that the detected macromolecule is endogenous to the cell; thus, Xu et al. continues to anticipate the claims.

Claims 44-51 and 63 are allowable.

Claims 42 and 62 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen Cochrane Carlson, Ph.D. whose telephone number is 571-272-0946. The examiner can normally be reached on 7:00 AM - 4:00 PM, off alternate Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Kathleen Kerr Bragdon can be reached on 571-272-0931. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Karen Cochrane Carlson, Ph.D./

Primary Examiner, Art Unit 1656